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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,688	09/12/2003	Rafael De Cardenas	2003P12262US	7365

7590 12/03/2004

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

KERSHTEYN, IGOR

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,688

Applicant(s)

CARDENAS, RAFAEL DE

Examiner

Igor Kershteyn

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16 is/are rejected.
- 7) ☒ Claim(s) 9-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/12/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukue et al. (6,196,799).

In figures 5(a), 5(b), and 6, Fukue et al. teaches a turbine blade assembly comprising: a platform 61 having a leading edge face (not numbered), a trailing edge face (not numbered), a first side and a second side; an airfoil portion 51 extending from the platform 61; a hollow shank portion (not numbered) disposed beneath the platform 61; a cooling channel 64 extending through the platform 61 beginning in an area near the leading edge face and extending through the trailing edge face of the platform 61, the cooling channel 64 extending substantially proximate to the first side of the platform 61; and a plurality of cooling holes 66a,70 extending between the hollow shank portion and the cooling channel 64, wherein the cooling holes 66a,70 are oriented substantially transverse to the cooling channel 64.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukue et al. (6,196,799) in view of Brownhill et al. (2,656,147).

Fukue et al. teach all the claimed subject matter except that they don't teach the cooling channel is substantially oval shaped, oblong shaped, has substantially rounded corners.

Brownhill et al. in figure 3, teach a turbine blade assembly having a cooling channel 39 that is substantially oval shaped, oblong shaped, and has substantially rounded corners.

Since Fukue et al. and Brownhill et al. are analogous art because they are from the same field of endeavor, that is the turbine blade cooling art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the cooling channels of Fukue et al. with the shape as taught by Brownhill for the purpose of minimizing the danger of the cooling passages becoming choked by foreign matter and at the same time promoting more efficient cooling due to increased surface area (See Brownhill et al. reference column 2, lines 23-27).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over fukue et al. (6,196,799) in view of Liang (6,210,111).

Fukue et al. teach all the claimed subject matter except that they don't teach the cooling channel includes an upper wall and a lower wall, which are substantially flat and parallel.

Liang in figures 1 and 2, teaches a turbine blade assembly 10 having a blade platform 24 with a cooling channel 34, wherein the cooling channel includes an upper wall and a lower wall, which are substantially flat and parallel.

Since Fukue et al. and Liang are analogous art because they are from the same field of endeavor, that is the turbine blade cooling art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the cooling channels of Fukue et al. with the shape as taught by Liang for the purpose of providing a turbine blade that is cooled sufficiently without significantly increasing the stress in the blade during engine operation.

Allowable Subject Matter

Claims 9-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of three patents.

McLaurin et al. (5,639,216) is cited to show a turbine blade assembly having a cooling channels in the platform but fails to teach cooling holes extending between the hollow shank and the cooling channel.

Tomita et al. (6,071,075) is cited to show a turbine blade assembly having a cooling channels in the platform but fails to teach cooling holes extending between the hollow shank and the cooling channel.

Fukue et al. (6,190,130) is cited to show a turbine blade assembly having a cooling channels in the platform but fails to teach cooling holes extending between the hollow shank and the cooling channel.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

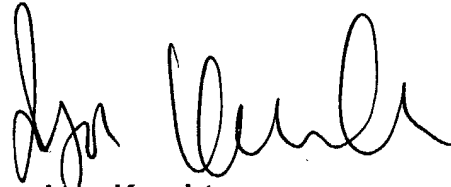
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

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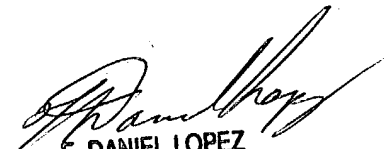
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK

November 23, 2004



Igor Kershteyn
Patent examiner.
Art Unit 3745



F. DANIEL LOPEZ
PRIMARY EXAMINER